



# IWA PIPELINE

## 25<sup>TH</sup> ANNIVERSARY

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## The history of island water... *from poor to shining pour.*



### Before IWA

It's hard to believe, but there was a time — commonly referred to as "The Dry Ages" — when there was no Island Water Association.

Return with us now to the Sanibel and Captiva of long ago when the islands were famous for their tomatoes and limes, when "development" was what you went to school for, when there was no causeway, no tourists, no day-trippers and not much water.

In those days water for irrigation or bathing came from a few artesian wells or was collected in cisterns or rain barrels. Water for drinking and cooking came from the mainland in bottles.

Even when development began in earnest in the 1950's nobody worried too much about water. Usually, if you dug a

hole about 10 feet deep you could find something you could take a bath in and in some cases, drink.

It wasn't until the causeway was built in 1963 that people got concerned about water. Some of the shallow wells were going bad because of the new canals and it was obvious that the bridge was going to bring a lot more folks to paradise.

### The Birth — after considerable labor — of IWA



In 1964 the Sanibel/Captiva Chamber of Commerce was approached by a group of people from Pine Island calling themselves the Greater Pine Island Water Association. It seems they too were concerned about where their water was coming from and suggested a cooperative effort to build a water system for the three islands.

A committee of islanders was formed to look over the proposition. It included Francis Bailey, C. Smith Kauffman, E.C. Konrad and John Kontinos who acted as chairman. They decided to accept G.P.I.'s offer and in 1965 the Island Water

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Association filed for incorporation with these same gentlemen plus Paul Stahlin as directors.

Their first order of business was to hire a lawyer, an engineering firm and Pat Murphy, who was going to run the operation. The second order of business was to find two things — customers and money. The money — some \$795,600.00 — finally came from the Farmers Home Administration (FHA) and the customers came as a result of Pat Murphy beatin' the bricks. 600 customers were needed to get things started and by February of '65 535 had signed up. To get the remaining 65 customers it was necessary to extend the offer of a low connection fee — \$108 — for another month or so.

In August IWA signed a contract with G.P.I. to pay 31¢ per thousand gallons for G.P.I.'s water.

In November the contractors were chosen. Rusty Plumbing Company would take care of the pumping facilities and the treatment plant; Foster Marine Contractors would handle the distribution system; and the whole works was supposed to be wrapped up by August of 1966.

They didn't miss by much. On November 16, 1966 the final inspections were completed and the water was turned on to more than 600 lucky islanders.

Well, in those days nobody claimed the water was real tasty, but it didn't make anybody sick and it didn't cost much... \$9.00 minimum for the first 7,000 gallons and 45¢ per thousand gallons after that. Some folks claimed it was a bargain considering all the extra minerals that came with it.

At any rate people used enough of it to push IWA's water sales over the \$4,000 mark.



## Troubled Waters

It didn't take long for trouble to brew between IWA and the Greater Pine Island Water Association. IWA felt that GPI was charging too much for their water and GPI thought that IWA should pay their bills. In September of 1968 GPI threatened to shut off the water if past bills weren't paid. Several meetings between the two boards didn't help much and in February of 1969 GPI filed a suit against IWA.



It was becoming clear that if Sanibel and Captiva were going to have a reliable source of water they'd better find it in their own back yard. In March of '69 the IWA board authorized a study to determine the practicality of building a water treatment plant on the island.

After studying various water treatment systems the IWA board decided to build an electrodialysis plant which would convert brackish water to potable water with a process called membrane desalination. The water would come from four deep wells about 600 feet deep with a metal casing to about 500 feet.

The new plant was to be ready in September of 1973 but in the meantime the islands were facing serious water shortages. Membership had grown to 900 and they were using water at a rate of 160 million gallons a year!

There were several ideas to ease the situation. Many islanders were in favor of a moratorium on water hook ups to give IWA

the chance to catch up. The board curtailed the use of water for lawns and shrubs allowing sprinkling only one day a week. "Water for people only" was the cry. Portable treatment units were ordered for wells on the island in order to supplement the water from Pine Island.

The islands' population was increasing much more rapidly than anyone had predicted. In September of 1972 the board was told that the plant they were about to build would be too small to meet the increasing demands by the time it was built.

There was, however, some good news. IWA was out of the red for the first time. Its debts were being paid and it was showing a modest profit.

Finally in November of 1973 the new plant began operation producing up to 1.4 million gallons of water per day. Practically everybody thought the islands' water problems were a thing of the past.

Of course they weren't counting on the development of Sanibel and Captiva that was accelerating in geometric proportions. In addition they hadn't heard the Boggs Report (no pun intended) that showed that Sanibel's fresh water system was suffering alarming salt water intrusion.

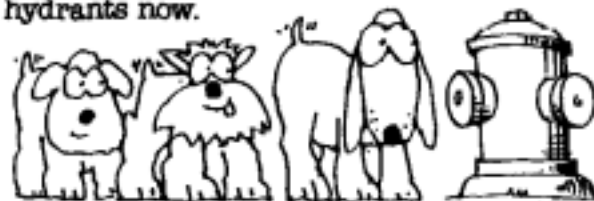
It wasn't long before the output of IWA's electrodialysis plant had to be beefed up to 2.4 million gallons a day and plans were getting underway for a new plant to help cope with the 3 million gallon per day demand predicted for 1980.

The new plant would use reverse osmosis to desalinate the brackish water obtained from the Suwanee and Hawthorne aquifers 600 to 900 feet beneath the surface.

In May of 1980 the reverse osmosis facility was dedicated and the first of six R.O. modules was turned on. Each of the modules had a capacity of 605,000 gallons. If all were used the facility would provide the islands with 3.6 million gallons of water per day. Included with the facility were two new storage tanks of 5 million gallons each. In the spring of 1981 the second module was turned on.

## IWA Today

Since that time the demand for water for the island has increased dramatically. Today IWA is drawing from 16 deep wells on Sanibel; it operates five modules (or trains) in the R.O. Plant plus the E.D. Plant; there are over 15 million gallons of water storage with another 1 million gallon tank under construction on Captiva; and IWA is serving 10,118 units with potable water (1,100,938,000 gallons were pumped in 1989). The original IWA system gave no fire protection — many improvements have allowed the connection of almost 400 hydrants now.



Surprisingly the cost of IWA water has not increased dramatically. The average homeowner today pays \$22.50 for the 5,000 gallons of water he uses per month. In 1966 that same amount of water would have cost \$35 in 1989 dollars.

The IWA plant has served as a model for water plants all over the U.S. and in Indian, Japan, Saudi Arabia and other foreign countries.

IWA has come a long way in 25 years. It's fortunate that with all of the growth on the islands there is still a reliable supply of water at reasonable cost.

The future may not be so bright. If islanders continue to use water as they do now there is little doubt that the cost of water is going to rise significantly. Already there is much concern about salt water intrusion in some of our deep wells. Of course there will always be some kind of raw water to treat, but as it becomes more contaminated from salt water intrusion it will be more costly to make it potable.

Intelligent conservation measures could postpone these increased costs...otherwise we will have to pay the piper and IWA will have to find the most equitable way to distribute the extra costs.

**THE ISLAND WATER ASSOCIATION, INC.**  
**COMPARISON OF 1989 BUDGET TO ACTUAL RECEIPTS AND DISBURSEMENTS**

		<u>TWELVE MONTHS OF</u>
<u>RECEIPTS</u>	<u>1989 Budget</u>	<u>Actual Receipts</u>
Water Sales	\$3,807,061	\$3,669,091
Interest	80,000	119,286
Other Receipts	10,000	24,251
Connection Fees	200,000	144,429
<b><u>TOTAL RECEIPTS</u></b>	<b>\$4,097,061</b>	<b>\$3,957,057</b>
1989 Carryover	1,662,058	1,662,058
<b><u>TOTAL FUNDS</u></b>	<b>\$6,759,119</b>	<b>\$5,619,115</b>
		<u>TWELVE MONTHS OF</u>
<u>DISBURSEMENTS</u>	<u>1989 Budget</u>	<u>Actual Disbursements</u>
Wages and Benefits	\$1,186,066	\$1,200,945
Professional Fees	70,000	91,776
Electricity	672,200	618,667
Telephone	13,800	14,363
O & M Service & Supply	590,800	591,738
Motor Fuels	13,800	11,894
Insurance	100,400	100,020
Postal Charges	12,000	11,363
Travel, Training, Conferences	23,000	19,727
Debt Repayments	300,000	303,590
Capital Expenditures	1,943,600	1,416,096
Contingency Fund	100,000	17,000
<b><u>TOTAL DISBURSEMENTS</u></b>	<b>\$5,025,366</b>	<b>\$4,484,199</b>
<b><u>EXCESS OF FUNDS OVER DISBURSEMENTS FOR 1989</u></b>		<b>\$1,134,916</b>
<b><u>LESS RESERVE REQUIREMENTS &amp; CONTRACTUAL OBLIGATIONS</u></b>		<b>\$963,277</b>
<b><u>NET AVAILABLE FUNDS</u></b>		<b>\$161,639</b>

These figures represent the unaudited accounts as of December 31, 1989.

*Thomas A. Sharp*

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 President